What is claimed is:

1. A zoom lens barrel comprising:

a linear guide ring linearly movable along an optical axis without rotating;

a moving frame which is supported by said linear guide ring to be linearly movable along said optical axis without rotating;

a male helicoid formed on an outer peripheral surface of said moving frame;

a rotatable ring which is coupled to said linear guide ring at a predetermined relative rotational position between said rotatable ring and said linear guide ring to be freely rotatable relative to said linear guide ring without moving along said optical axis relative to said linear guide ring;

a female helicoid formed on an inner peripheral surface of said rotatable ring, said female helicoid being engaged with said male helicoid;

a switching ring which is coupled to said rotatable ring at a predetermined relative rotational position between said switching ring and said rotatable ring to be freely movable along said optical axis relative to said rotatable ring and rotatable together with said rotatable ring, said switching ring being coupled to said moving frame to be freely rotatable relative to said moving frame

without moving along said optical axis relative to said moving frame;

a switching member which is supported by said linear guide ring to be freely movable in a circumferential direction of said linear guide ring within a predetermined range of movement without moving along said optical axis relative to said linear guide ring; and

a switching-member moving groove which is formed on an inner peripheral surface of said switching ring to be engaged with a follower projection projecting from said switching member,

wherein said switching-member moving groove includes a first inclined section, a switching section, a second inclined section and an assembling section, in that order from rear to front of said zoom lens barrel,

wherein said first inclined section is shaped so that a lead angle thereof is the same as that of the threads of said female helicoid of said rotatable ring and so that a direction of inclination of said first inclined section is opposite to that of said threads of said female helicoid of said rotatable ring, wherein said follower projection is inserted in said switching-member moving groove via an open rear end of said first inclined section,

wherein said switching section is shaped to extend parallel to said optical axis from a front end of said first

inclined section,

wherein said second inclined section is shaped to extend parallel to said first inclined section from a front end of said switching section, and

wherein said assembling section extends rearwards from a front end of the second inclined section to be parallel to said optical axis.

2. The zoom lens barrel according to claim 1, further comprising:

a first lens group, a second lens group and a third lens group, wherein each of said first, second and third lens groups is movable along said optical axis;

a second/third lens group support unit which supports said second lens group and said third lens group,

wherein said moving frame serves as a lens support ring which supports said first lens group, and

wherein said switching member is associated with said second/third lens group support unit so that forward and reverse movements of said switching member in said circumferential direction of said linear guide ring cause a distance between said second lens group and said third lens group to become wide and narrow, respectively.

3. The zoom lens barrel according to claim 2, wherein said second/third lens unit is linearly guided along said optical axis to perform zooming and focusing

operations.

4. The zoom lens barrel according to claim 1, wherein said linear guide ring comprises a guide slot, in which said switching member is positioned, for guiding said switching member in said circumferential direction of said linear guide ring.

5. The zoom lens barrel according to claim 4, wherein said switching member is positioned in said guide slot so that an outer peripheral surface of said switching member is substantially flush with an outer peripheral surface of said linear guide ring.

6. The zoom lens barrel according to claim 2, wherein said rotatable ring comprises at least one cam for moving said second/third lens group support unit by rotation of said rotatable ring.

7. The zoom lens barrel according to claim 1, wherein said switching ring and said moving frame are coupled in a bayonet manner.

8. The zoom lens barrel according to claim 1, wherein said rotatable ring and said linear guide ring are coupled in a bayonet manner.